U.S. Department of Housing and Urban Development

Chief Information Officer

Special Attention of:

Transmittal for Handbook No.: 3410.1

Issued: 04/22/2011

1. This Transmits:

HUD Policy For IT Project Planning and Management (PPM)

This policy establishes a solid project development, the foundations of which include consistent and repeatable processes and a standardized structure for the planning and oversight of an IT Project's entire life cycle. Further, the PPM Policy creates an environment characterized by increased accountability which ensures successful outcomes for HUD's IT Projects.

Attached you will find the second of potentially ten new policies about HUD's revised information technology management framework. This policy establishes the overall integrated management process for planning, selecting, managing, and retiring IT assets in HUD's IT portfolio. The components of the framework are the result of addressing weaknesses that were cited in Government Accountability Office reports over the past several years.

The framework being implemented at HUD is based on best practices at large Federal agencies and across the private sector. They incorporate all recent Federal mandates and directives and will help HUD achieve desired business outcomes from its investments in IT.

Please do hesitate to contact Chris Niedermayer, Deputy CIO Chief Information Officer for Customer Relationship and Performance Management with any questions or comments. He may be reached at 402-8001 or chrisn@hud.gov.

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HUD Policy for Project Planning and Management (PPM)

Handbook 3410.1

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Version History

Version Number	Implemented By	Revision Date	Approved By	Approval Date	Description of Change
Draft 1.0	Chris Niedermayer	December 22, 2010			Initial Draft
Draft 1.1	Chris Niedermayer				OCIO Updates
1.0	Chris Niedermayer				Departmental Non-Concurrences Updates
Final	Jerry E. Williams		Jerry E. Williams	May 6, 2011	Finalized document

Contents

1. Purpose 1
2. Background 1
3. Scope 2
4. Policy 2
5. Overview of the HUD Project Planning and Management Life Cycle 3
6. Responsibilities 6
7. Effective Date/Implementation 7
Appendix A: Tailoring Projects 8

1. Purpose

This Project Planning and Management (PPM) policy establishes PPM as the authoritative source of requirements, objectives, procedures, guidelines, and standards that govern effective information technology (IT) project development and delivery at the Department of Housing and Urban Development (HUD). As such, this policy makes PPM an IT project management requirement for all HUD IT projects.

PPM promotes effective and efficient processes for designing and operating information systems through a process of progressive steps that help ensure proper management review and approval, while allowing the flexibility to accommodate varying developmental approaches. Additionally, as a major component of the HUD IT Management (ITM) Framework, PPM enables the effective integration of the project and its outputs with HUD's enterprise architecture, IT security, IT acquisition management, and IT capital management processes.

This is the first issuance of this policy. It overrides any conflicting policies that were published prior to its issuance.

2. Background

Successful IT management requires an effective project development approach that 1) incorporates best government and commercial practices through a consistent and repeatable process, and 2) provides a standard structure for planning, managing, and overseeing IT projects over their entire life cycle.

The PPM Life Cycle establishes a solution development and accountability environment within which HUD IT projects achieve consistently successful outcomes that maximize alignment with Department-wide and individual program goals and objectives, while advancing the HUD IT target architecture. Implementation of the PPM Life Cycle enables HUD to improve the quality of project planning and execution, reducing overall project risk.

The PPM Life Cycle as part of the ITM Framework enables HUD to manage IT projects with more transparency, accountability, and responsibility (Figure 1).

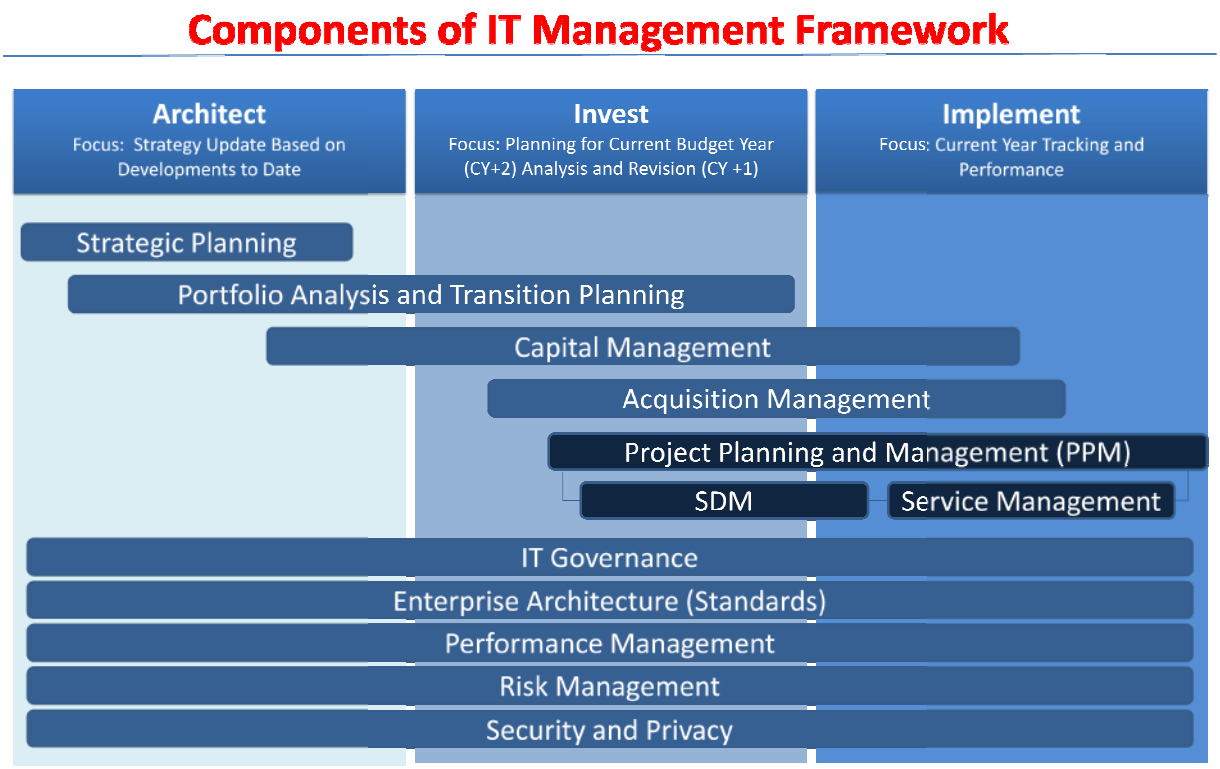

Figure 1 - PPM as a Component of the IT Management Framework

3. Scope

This policy applies to all HUD IT projects, including all information systems acquired, developed, enhanced, or maintained by or for HUD. These projects include Commercial Off-the-Shelf (COTS) software, Government Off-the-Shelf (GOTS) software, and eGovernment systems utilized directly within the HUD network. This policy applies to applications and general support systems — whether internal or contractual, infrastructure, or programmatic — and administrative systems and projects.

Anyone who acquires, develops, supports, has responsibility for, or operates an information system to collect or maintain information on the behalf of HUD has a responsibility to understand and follow this policy.

This policy excludes small desktop applications and any IT projects related to Ginnie Mae's secondary mortgage activities[1].

4. Policy

This policy mandates the use of the PPM Life Cycle for the management HUD IT projects. This policy requires:

[1] Title III, Sec 309 of the National Housing Act exempts all systems that are leased, owned, or operated for or on behalf of Ginnie Mae.

1. All HUD projects that involve planning for and acquisition, management, and use of IT capital assets to be managed in accordance with the HUD PPM Life Cycle.
2. All HUD IT stakeholders, including executive sponsors, managers, and project team members, to participate in HUD IT projects in accordance with the requirements of the PPM Life Cycle.
3. All IT projects to have an assigned Program Sponsor/Owner, Business Project Manager(s), and IT Project Manager(s) who possess the required competencies, experience, and certifications for the project(s) being managed.
4. Each IT project to produce a detailed project schedule that defines tasks at a level of detail that provides schedules, milestones, and resources necessary to ensure successful project execution.

This policy is part of a set of integrated policies defined by HUD's Information Technology Management (ITM) Framework. All IT investments must follow these policies. Please see the *HUD Policy for Information Technology Management* for more detail. See *Roles and Responsibilities for the HUD Information Technology Management Framework* to understand the specific roles and responsibilities as they apply to this policy. See the *Authorities and Guidelines for the HUD Information Technology Management Framework* for the list of authorities and guidelines upon which this policy is based. All of these documents may be located on HUD's Intranet at this location: http://hudatwork.hud.gov/po/i/itm/index.cfm.

The elements of this policy are based on guidance from both the Office of Management and Budget (OMB) and the Government Accountability Office (GAO) and incorporate practices and standards from the National Institute of Standards and Technology, the Project Management Institute, and other industry information technology management groups. The specific directives on managing IT investments are listed in Appendix A in the *HUD Policy for Information Technology Management.*

Implementation Note
In order to promote an orderly transition from the current state of project management at HUD to the new state described in this PPM policy, existing HUD projects must, upon publication of this policy, meet PPM requirements for all remaining phases in their development life cycles. However, these existing projects do not need to re-document phases completed under the current System Life Cycle Management Policy.

5. Overview of the HUD Project Planning and Management Life Cycle

The HUD PPM Life Cycle is an ordered series of activities that identifies the needs for the system, defines the project scope and plans the system course, designs and implements the solution, tests and deploys the solution, operates/maintains it over its productive life span, and finally retires/terminates the solution in a formal way. An IT-related solution can be an information system or another IT-related activity, such as the development and delivery of an IT service.

Procedures, standards, and guidance supporting the PPM describe the appropriate activities, processes, and techniques to be employed during each phase of the PPM Life Cycle. The tasks and documents executed throughout the project planning and management phases produce artifacts designed to satisfy Federal IT requirements as well as promote efficient and effective project planning and management. System documentation must be reviewed and updated as needed throughout the project life cycle. PPM will help significantly reduce the need for *ad hoc* data calls that can interrupt project execution.

PPM Phases

The PPM Life Cycle at HUD consists of seven phases with control gates for advancement between phases:

1. Need/Concept
2. Definition
3. Design
4. Execution of Solution
5. Deployment
6. Operations and Maintenance
7. Decommission

The **Need/Concept Phase** begins after an investment has been approved and structured into an IT initiative (or initiatives) for further analysis and development as one or more projects. This preliminary work leads to the development of a Work Request Form (WRF) completed by the project sponsor that initiates the Needs/Concept Phase. During this phase, key documents are developed to identify the scope of the project and a rough order of magnitude cost estimate, including the Project Charter.

Definition Phase activities define the HUD business need. During definition, the project team documents detailed business and functional requirements, alternatives and benefit cost analyses, and a detailed project plan for the project. A high-level solution architecture is reviewed and approved through applicable Enterprise Architecture (EA)/Capital Planning Investment Control (CPIC), IT security, and cost accounting procedures. The project baseline is established and approved at the Definition stage review. In addition, the specific route through the rest of the PPM is determined, including the development methodology and acquisition approach.

The particular shape of the **Design Phase** (and subsequent phases through deployment) depends on the selection of the specific approach/method to be followed on the specific project. PPM guidance provides assistance to project teams in the selection of appropriate approaches for specific task types, but the project team is ultimately responsible for the selection of the approach that best suits the project.

The activities in the **Execution of Solution Phase** depend on the specific development approach selected for the project. Two key points are:

1. Execution must include testing and project reviews. Only solutions that have been through this testing process can be approved for deployment
2. Execution must include the development of any artifacts (e.g., training, communications and messaging) that are required for use during deployment

The **Deployment Phase** establishes the solution in its production environment. If the solution is an information system, data are converted as needed, and sample testing is conducted to verify the system. Additionally, security certification is conducted and capital management reporting requirements must be met. The system must have a written authorization to operate in order to proceed *prior to* beginning the operations and maintenance phase.

The **Operation and Maintenance Phase** includes activities for the solution's ongoing functions and maintenance. This phase requires periodic risk assessments, testing, recertification and reauthorization,

capital management, IT security, cost accounting reviews, and an EA annual review. Through IT Portfolio analysis, obsolete systems and technologies shall be identified and become candidates for retirement.

The **Decommission Phase** is triggered by the identification of an obsolete system or technology through the IT Portfolio analysis. HUD's IT retirement strategy is used to end the operation of the system in a planned, secure, orderly manner, including archiving system components and data, or incorporating them into other systems as required, and securely disposing of hardware and software as appropriate.

System Classification

The classification of a system helps to determine the PPM Life Cycle activities needed for each phase. This includes the necessary system documentation, level of detail, and the degree of adaptability to suit the needs and characteristics of the project. The PPM Life Cycle procedures address specific requirements for systems based on their classification. They are maintained on HUD's Intranet site at this location: http://hudatwork.hud.gov/po/i/itm/index.cfm

Integration with HUD's Project Management Methods and other ITM Framework Components

PPM activities include many, but not all, standard project management requirements. Thus, there is a required integration of HUD project management methods throughout the PPM. Some integration responsibilities are highlighted below.

1. The Business Project Manager and IT Project Manager are responsible for ensuring that the system/solution advances in an orderly fashion through the life cycle phases.
2. Activities must be planned in advance for each life cycle phase. PPM requirements are the same for general support/infrastructure systems and programmatic/administrative systems. The level of detail of each section should be consistent with the size and complexity of the system/solution. Business Leads and IT Project Managers along with the integrated project team members are responsible for tailoring the project's life cycle processes and development and management of the Project Plan/Schedule.
3. Although all phases must be completed and documented, the phases do not need to occur in a strictly linear fashion. Use of development approaches that employ iterative, non-linear development paths does not require a waiver as long as all PPM requirements are eventually met.
4. Project planning and management requires documentation. Documenting each major step/task and the project's solution architecture helps ensure sound life cycle management, enterprise architecture compliance, and alignment with IT investment management processes. A Program/Project Management Plan (PMP) refers to the documents of the life cycle as a whole. It includes the information the Program Sponsor/Owner approves at appropriate control gates, checkpoints, and review points in the life cycle. Compiling PMP documents begins in the Needs/Concept Phase. The PMP is updated continuously throughout the project life cycle.
5. During the Definition Phase, the team develops a solution architecture that is maintained and checked for compliance with the HUD EA at appropriate checkpoints throughout the project's life cycle.
6. An approved security plan is required for all operational components of a system. The security plan must also include those components under development.

7. The design aspects of the system/solution life cycle may require tailoring for COTS or GOTS acquisitions. Interactions with other systems or modifications to the COTS or GOTS products require appropriate documentation.
8. The Business Project Manager and the IT Project Manager are responsible for communicating project information, assigning and developing the project team, managing the project work environment, and other project management activities that are not specifically included in the PPM approach. These expectations are detailed in HUD PPM guidance.

6. Responsibilities

The Office of the Chief Information Officer:

- Maintains and evolves the HUD PPM Life Cycle based on HUD and other Federal experience and the best practices of the IT industry
- Provides IT stakeholders with the training, templates, checklists, and other implementation and support required for them to use the PPM Life Cycle approach effectively

Project Sponsors and Project Managers:

- Follow the IT cost accounting structure established and maintained by the HUD Office of the Chief Financial Officer.
- Identify, plan, and execute the life cycle phases needed to deliver a desired information system or related solution based on the specific requirements of the business function. The order of implementing the phases and the level of detail required to complete them will vary on a project-by-project basis. For each project, the key to effectively using the PPM process lies in adapting the phases and deliverables that best suit the needs and characteristics of the project.
- Define projects in a manner that delivers functionality in six- to nine-month increments.
- Use a software development methodology consistent with HUD technical standards and an Earned Value Management (EVM) measurement approach. The use of methodologies such as RUP, RAD, Agile, and Spiral as well as the use of pilots and prototyping, is encouraged. Such adaptation must be documented and receive signed agreement by the CIO (or designee).
- Whenever possible, use software as a service (SaaS), a COTS, or a GOTS approach to meet mission requirements. HUD business processes should be modified to match the functional features of the products to the extent practicable.
- Plan for control gate reviews to advance from one life cycle phase to the next. The level of the review (Executive Investment Board (EIB), Customer Care Committee (CCC) or Technical Review Sub-Committee (TRC) will be determined in advance by the project team according to the standards laid out in the PPM procedures.
- Receive management approval before deploying all information system solutions.
- Hold periodic reviews and address cross program issues, progress, and program requirements through the Customer Care Committee.
- Produce a Work Breakdown Structure (WBS) following HUD's MS Project Template and manage project schedules using the enterprise version of MS Project Server that was established for this purpose.

7. Effective Date/Implementation

This policy is effective immediately upon date of approval.

This policy will not be implemented in any recognized bargaining unit until the union has been provided notice of the proposed changes and given an opportunity to fully exercise its representational rights.

8. Approved

Jerry Williams, Chief Information Officer

May 6, 2011

Date

Appendix A: Tailoring Projects

The PPM Life Cycle may be tailored to address the circumstances of each individual project using cost, interoperability, and exposure indicators. It aims to capture the minimum level of detail necessary to ensure project success. The decisions of PPM tailoring are captured in the Project Process Agreement (PPA), which documents the reasons for using, combining, or skipping specific artifacts applicable to the project.

Projects are classified as small, medium, or large based on the following criteria:

- **Cost** - A project's estimated development, modernization, or enhancement (DME) life cycle cost is an indicator of potential risk. Projects with high DME costs have typically greater opportunities to derail and may require additional documentation than those with low DME costs.
- **Interoperability** - Refers to the number of business areas or systems impacted by the project.
- **Exposure** - Defined as the level of interest in meeting project goals, i.e., business unit branch or division, senior mission area leader, the Secretary, OMB, Congress or other external entities.

  The classification also determines the level of oversight and decision-making that is applicable to the project. The Technical Review Sub-Committee (TRC) is the decision making authority for small projects; the Customer Care Committee (CCC) for medium projects; and the Executive Investment Board (EIB) for large projects. Decision making authority is illustrated in this table.

Cost	Interoperability	Exposure	Decision Making Authority
Less than $500,000	One program area	None of the below	TRC
$500,000 to $5 million	Two program areas	GDAS interest	CCC
Greater than $5 million	Three or more program areas	Secretary interest	EIB